INFLIGHT COMMUNICATIONS & ENTERTAINMENT SYSTEMS

Manufacturer or Service	Model/System/Service	General Capabilities	Remarks
Aerial View Systems P.O. Box 9905 Newport Beach, CA 92658 (714) 969-2470; Fax: (714) 969-5543; **aerialviewsystems.com**	**AVS 420ZX Auto-zoom Entertainment Camera**	Cabin video	System provides 25x zoom stabilized color with 460-line resolution, electronic shutter, simultaneous NTSC, PAL and S/VHS video outputs. 28 VDC/0.5 amp, 2.5 lb. $12,800. M1 modification provides smaller camera head, greater resolution, 25x optical zoom, improved stabilization, auto-black and white, improved low-light operation.
	AVS 460 Entertainment Camera	Cabin video	Miniature 2x telephoto lens; camera head and servo automatically adjust to different viewing attitudes for taxi, takeoff and landing while permitting the passengers to adjust the tilt at any time. Includes camera control unit (CCU), camera head, servo, lens, 2m cables, connectors, installation rack, tray and gussets.
	AVS 470 & AVS 470-AF SuperVision Camera	Cabin video	**AVS470 (tail and winglet)** — 4 mm wide-angle camera installed at the top of the tail providing panoramic view of the aircraft, sky and landscape ahead. Engines, thrust reverse, flaps/slats, ailerons and spoilers can be viewed. **AVS470 (winglet)** — 7.5 mm wide-angle camera installed in the winglet to assist pilot during taxi. **AVS470 (gear door auto-flip)** — 7.5 mm wide-angle camera installed through the nose gear trailing-link door permitting pilots to observe the gear, blown tires, hot brakes, flaps/slats, APU, ice, FOD, etc. Auto-flip automatically inverts video for the passenger landscape viewing when the gear is up. **AVS 480 MapTrac** — MapTrac software including interactive and auto-camera tracking of point of interest, POL library, moving maps, log and data page.
	AVS800	Auto-zoom glareshield camera	Provides up to 120x optical zoom in HD. Analog (NTSC and S-VHS) and digital HD-SDI (SMPTE 292M) outputs. 28 VDC
	AVS800HD	Chin camera	High definition. Analog (NTSC and S-VHS) and digital HD-SDI (SMPTE 292M) outputs. 28 VDC
	AVS850	Tail camera	High definition. Analog (NTSC and S-VHS) and digital HD-SDI (SMPTE 292M) outputs. 28 VDC
Air Partner plc Platinum House Gatwick Road Crawley, West Sussex RH10 9RP UK +44 (0)1293 844 800 **airpartner.com**	**Multi-lingual real-time iPhone app**	Enables user to locate Air Partner global charter information	The app is free to download and available in seven languages: English, French, Russian, German, Spanish, Italian and Portuguese. The language displayed is determined by the settings on a user's iPhone. A choice of 36 currencies is available in the cost calculator option.
	Cargo app	Enables user to determine best aircraft for cargo	As soon as the weight and dimensions of cargo are entered, in metric or imperial measurements, the app recommends which aircraft are most suited to the task. Up to four aircaft are suggested, supported by images and cargo hold diagrams, giving an indication of the type of aircraft needed to move a particular item, including outsize freight.

INFLIGHT COMMUNICATIONS & ENTERTAINMENT SYSTEMS

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Aircell LLC 303 S. Technology Ct. Building A Broomfield, CO 80021 (303) 301-3200 Fax: (303) 926-8970 **aircell.com**	**ATG 5000**	Gogo Biz Inflight Internet service on a standalone basis	Developed for operators who require a high-speed Inernet connection with optional ground-quality voice service in the U.S. Also designed for operators who want to add a high-speed Internet connection alongside an existing voice sysem. No need to remove any equipment.
	ATG 4000	Gogo Biz high-speed Inernet in U.S. for Aircell Axxess customers	Optional add-on developed for aircraft operators who have Aircell Axxess and want a high-speed Internet connection and voice capability in the U.S.
	Aviator 300/350	Near-global voice and light Internet	Developed for aircraft operators who want near-global voice and light Internet on virtually any business aircraft.
	Aviator 200	Multi-regional voice and light Internet	Developed for aircraft operators who want multi-regional voice and light Internet on virtually any business aircraft.
	Axxess	Multi-channel global voice and narrow-band data system	Two built-in channels of Iridium service provide both global voice and narrow-band data capabilities. Multi-channel PBX features include call routing, call waiting and conference calling. Aircell offers an array of color handsets (with standard earbuds/headset jacks) and interfaces include fax, graphical weather information and cockpit flight information. For broadband connectivity using laptops or smartphones, user can add Gogo biz or SwiftBroadband service to the standard Aircell Axxess system.
Aircraft Cabin Systems 2609 151st Pl. N.E. Redmond, WA 98052-5522 (425) 833-8008 **aircraftcabinsystems.com**	**HD LCD Video Monitors**	26-in. credenza monitor and two bulkhead monitor (26 in. and 17 in.	Developed for the Gulfstream G650. System adheres to the Gulfstream Cabin-Essential design philosophy, where most single-point failures will be resolved or mitigated automatically. System also employs two touchscreens, one 10-in. LCD screen located in the galley and the other a 5.7-in LCD located in the vestibule for cabin crew access. The 10-in. screen is also used for pre-screening video sources as well as controlling cabin functions such as window shades, video programmin presented to cabin video monitor, etc.
	CrystalTint LCD Monitors	NTSC, PAL, PAL-60, SECAM Video SDTV/480p and VGA/SVGA/UXGA compatible; AV input jacks; S-video; RGB PC and computer audio inputs; RS-232C interface; 16.77 million display colors.	Company makes 10- to 65-in. LCD cabin video monitors. 42-in. (70.0 lb.) and 65-in. (110 lb.) diagonal plasma screen monitors; 16.9 aspect ratio; 3.5-in. depth; infrared remote included. Optional wall-mounting brackets.

INFLIGHT COMMUNICATIONS & ENTERTAINMENT SYSTEMS

Manufacturer or Service	Model/System/Service	General Capabilities	Remarks
AIRVOD Entertainment Heather House Heather Road Sandyford Industrial Estate Dublin 18 Ireland Tel: +353 (0) 1 2913030 Fax: +353 (0) 1 2913031 **Airvod.com**	**Crystal 7, Crystal 10, Seatcentric, ICPU**	See Remarks	Portable and "seat centric" entertainment units for airline and business aircraft applications. Turnkey program offers operators a single source for hardware integration, DRM/content management, revenue streaming, etc.
Alto Aviation 113 Tolman Ave. Leominster, MA 01453 (978) 466 5992 Fax: (978) 466 5996 **altoaviation.com**	**Alto Executive System**	Audio system with custom equalization specific to aircraft model and floor plan. Consists of up to 4 ASP-512 speaker enclosures, 2 ASW-514 subwoofers and AA-606DC amplifier with custom EQ	The Executive System is best suited for aircraft that seat four to eight passengers, depending on airframe and floor plane. System weighs 13.5 lb.
	Alto Global System	Same as above	Designed for large cabins and additional components or engineering, as well as cabins with several audio "zones" and requires special engineering in each zone.
	Alto Custom Complete System	Same as above	Designed for larger aircraft with one or more zones such as a BBJ, Airbus and other transport category aircraft.
	Alto nVELOP System	Same as above	Provides an optimal surround experience for each seat, whether forward- or aft-facing, VIP or club.
	See Remarks	See Remarks	Alto also preduces realted products including custom amplifiers, entertainment loudspeakers, subwoofers, page/chime loudspeakers and surround sound systems available for any aircraft cabin.
ASiQ Ltd. Factory 2 1 Contour Cl. Research, Victoria, 3095 Australia +61-3-9437-1233 **asiq.com**	**Bizjet Mobile**	Inflight iPhone and IPad app	$999. Available from the IPhone App Store. Provides an alternative approach for passengers to use their iPhones and iPads without the requirement to install complex and expensive conventional cell phone hardware. Uses Bluetooth-based connection to aircraft staellite link. Litttle or no certification required. No roaming charges.
Astronics 130 Commerce Way East Aurora, NY 14052 **astronics.com**	**EMPOWER Series**	28 VDC to 115 VAC system supports power requirements for passenger and crew portable electronic devices	The latest generation EMPOWER system adds USB charging capability to provide power to operate and charge tablet devices such as the iPad, Samsung Galaxy and other passenger and crew portable electronic devices. AC and USB outlets can be installed separately. Overcurrent, overvoltage and thermal run-away conditions are managed locally by the system, thus protecting both the passenger device power cable and the device. TSO-C71 certified and DO-160E compliant.

INFLIGHT COMMUNICATIONS & ENTERTAINMENT SYSTEMS

Manufacturer or Service	Model/System/Service	General Capabilities	Remarks
ARINC, Inc. 2551 Riva Rd. Annapolis, MD 21401 (800) 633-6882 Fax: (410) 266-2329 **arinc.com**	**ARINC Direct**	Business Aviation-centric services	ARINC Direct Business Aviation Solutions is an array of services tailored for business aviation such as: flight planning and weather, flight following, contract fuel, international trip support, data link or satellite communications including Inmarsat (L-band), Ku/L-band switching, automatic fax detection, and an online interface to view real-time traffic. ARINC's Inmarsat services are available for the following connection types: Swift 64, Swift Broadband/BGAN, Aero-H/H+/I, and Mini-M. Additionally, ARINC Direct offers Iridium voice connectivity for aircraft equipped with International Communications Group (ICG) units. ARINC Direct Dial offers single-number connectivity to operator's entire aircraft fleet, regardless of connection type.
	GLOBALink	Airline-centric services	GLOBALink's inflight cockpit applications include: message management, information reporting, weather, and flight crew security services. Cabin applications include seatback messaging (e-mail and SMS capabilities), Live Text News (LTN) provides regularly updated entertainment and informational content, and Cabin Connect Suite delivers reliable connectivity to laptops with flexible bandwidth and hourly pricing options. The InFlight Services Portal allows airlines fast and easy access to all passenger accounts, tracks usage and trends, and enables new advertising and promotional opportunities.
Avionics Innovations 2450 Montecito Rd. Ramona, CA 92065 (760) 788-2602 **avionicsinnovations.com**	**See remarks**	Integratged cabin entertainment	Company designs and manufactures a wide variety of FAA/PMA-approved integrated video, audio entertainment and cabin management systems for business aviation.
Audio International *(subsidiary of DeCrane Aerospace)* 7300 Industry Dr. North Little Rock, AR 72117 (501) 955-2929 Fax: (501) 955-2988 **decraneaerospace.com**	**See remarks**	Cabin management and inflight entertainment systems	Company produces a wide variety of cabin audio and video systems and subsystems including DVD/CD players and LCD flat-screen monitors. Recently introduced a line of touch-screen monitors.
Blue Sky Network 1298 Prospect St. Ste. 1D La Jolla, CA 92037 (858) 551-3894 **blueskynetwork.com**	**Global Aircraft Tracking and Satellite Communication**	Global aircraft tracking and satcom	Inmarsat-based automated flight following and two-way messaging.

INFLIGHT COMMUNICATIONS & ENTERTAINMENT SYSTEMS

Manufacturer or Service	Model/System/Service	General Capabilities	Remarks
Cobham SATCOM Lundtoftegaardsvej 93 D 2800 Kgs. Lyngby Denmark +45 39 55 88 00 **www.cobham.com/satcom**	**JetLAN Cabin File Servers and Routers**	Cabin audio, cabin video, cabin management, Wi-Fi hotspot/LAN, email, Internet, SMS, Inmarsat compatible, SwiftBroadband, Swift64	Airborne network routers based on Linux and supporting other network applications. Telecom interfaces allow utilization of advanced satcom systems. Supports Swift64 and SwiftBroadband. Extensive avionics I/O for aircraft operations including ARINC 429, 717 and others.
SATCOM PO Box 31093 Tokai, Cape Town RSA 7966 +27 (21) 700 7000 Fax: +27 (21) 700-7199	**JetLAN AS250 Server**	EFB, cabin audio, cabin video, cabin management, moving map/info, Wi-Fi hotspot/LAN, email, Internet, SMS, Inmarsat compatible, SwiftBroadband, Swift64	A range of cabin file servers and related software applications including moving maps and network peripherals. Telecom interfaces allow utilization of advanced satcom systems. Supports VoIP, IPTV, ACARS, Swift64 and SwiftBroadband. Extensive avionics I/O for aircraft operations including ARINC 429, 717 and others.
	HGA-7001	Satcom high-gain antenna	ARINC 781 fueselage-mount phased array antenna or use with Inmarsat Classic Aero (H/H+), Swift64 and SwiftBroadband satcom systems.
	SDU-7330	Satcom data unit	Four-channel, 3 MCU package provides a LRU plug and play upgrade from Swift64 to SwiftBroadband.
	HGA 6000	Satcom high-gain antenna	Small, mechanically steered Aero H/H+, Swift64 and SwiftBroadband Satcom antenna. Specifically deisgned for mounting under the tail radome of an aircraft. Can accept steering commands directly from any ARINC 741 compoatible satellite data unit, thus eliminates the need to install a separate antenna control unit (ACU) or beam steering unit (BSU), reducing system box count and improving empenage weight distsribution and installation simplicity.
	Aero-SB+	432 Kbps SwiftBroadband satcom	Provides 432 Kbps SwiftBroadband satcom built-in router, Wi-Fi and ISDN interfaces.
	Aviator 200	e-mail, Internet browsing, smart phone connectivity, voice services, streaming video	Designed for midsize, light- or very-light jets and turboprop aircraft. Background IP up to 200 Kbps, AMBE2 voice channel (standard voice), streaming 8/16 Kbps IP service, coverage down to 20-deg. elevation
	Aviator 300	SwiftBroadband service	Designed to provide compact and lightweight SwiftBroadband service. Features include data rates up to 332 Kbps, low cost voice service, compatible with WiFi handheld devices; video streaming, VoIP connectivity, ISDN connectivity, secure communications capable (STE, STU, KIV and HAIPE compatible). Includes built-in router, built-in Ethernet switch, and built-in PBX. Existing users of Thrane & Thrane's Aero-I and Aero-M systems can easily upgrade to the Aviator 300 while retaining the installed TT-5006 antenna.
	Aviator 350	e-mail, Internet browsing, smart phone connectivity, voice services, streaming video	Designed for small- to midsize airframe aircraft. Provides email, Internet browsing, smartphone connectivity, streaming video, secure communications capable. Provides up to 432 Kbps when combined with a high-gain antenna and SB X-Stream services from Inmarsat. Also features multi-user capability, built-in router, wireless functionality, supports Wi-Fi handheld device.
	Aviator 700	See Remarks	High-gain antenna (HGA) based system provides pilot and crew voice dialing from the cockpit MCDUs and Level D software and hardware making the system compliant to support FANS 1/A, CPDLC and voice safety service operations via the systems cockpit data and H+ voice channels.

INFLIGHT COMMUNICATIONS & ENTERTAINMENT SYSTEMS

Manufacturer or Service	Model/System/Service	General Capabilities	Remarks
Custom Control Concepts 6020 S. 190th St. Kent, WA 98032 (206) 575-0933 Fax: (206) 575-0982 **custom-control.com**	**See remarks**	Customized inflight entertainment and cabin management systems	HD LCD monitors up to 64 in., Blu-ray disc players, DVD/CD players, Dolby Digital 5.1 and 7.1 surround sound, AVOD (Audio Video on Demand), SkyShow HD 3-D moving map system, expandable media sStorage units, iPad/iPhone/iPod docking and CCC's iPlane application, custom lighting, switch panels, cables, and system controllers.
	iPlane IFE and CMS Control	See Remarks	Wireless control for Cabin Management and Inflight Entertainment systems using IPad, IPhone or iPod Touch. Combines the power and convenience of a dedicated cabin remote with today's most popular touch devices.
digEcor, Inc. 1535 N. Mountain Springs Pkwy. Springville, Utah 84663 (801) 489-2022 Fax: (801) 489-2104 **digecor.com**	**digEplayer**	Inflight entertainment	Designed for use inflight, the digEplayer family of products are seven to 10-in. (screensize) hard-drive-based devices that provide a variety of movies, TV shows, music videos, music, games, and books that are available on demand. The company offers turnkey services including content management, delivery, repair and training.
DPI Labs, Inc. 1350 Arrow Hwy. La Verne, CA 91750 (909) 392-5777 Fax: (909) 392-0277 **dpilabs.com**	**See Remarks**	See Remarks	Company offers a full ine of cabin electronics from switch panels to full-up Cabin Management Systems. DPI has recently targeted obsolete Pacific Systems/Airshow components in its product offerings.
eDigital 18770 W. Bernardo Dr. San Diego, CA 92127 (858) 304-3016 **edigital.com**	**eVU**	Portable IFE player	Eight-in, active color LCD, 2 lb. 9 oz. (with battery), USB 2.0 Host connector, MP3 audio, MPEG-4 video. Optional: touch-screen, Wi-Fi and credit card reader. e.Digital works with existing content providers and can source content from any of the popular CSPs. Using its proprietary content encryption, e.Digital has been approvedd by all of the maor motion picture studios for "Early Window" content.
EMS Aviation 121 Whittendale Dr. Morristown, NJ 08057 (856) 234-5020 400 Maple Grove Rd. Ottawa, Ontario Canada K2V, 188 (613) 591-9064 **emssatcom.com**	**Numerous**	Satcom, inflight entertainment, messaging	This newly acquired division of Honeywell provides a host of satellite-based airborne Internet connectivity and IFE, messaging and tracking, data storage and replay; Inmarsat, Iridium, Ku-band and air-to-ground connectivity systems.

INFLIGHT COMMUNICATIONS & ENTERTAINMENT SYSTEMS

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Emteq Emmer Dr. New Berlin, WI 53151 (262) 679-6179 Fax: (262) 679-6175 **emteq.com**	**eConnect**	See Remarks	Single LRU provides CMS control, IFE and a 802.11 wireless N router. In VLJ to light jet size aircraft, the eConnect can be the entire aircraft's CMS, IFE and wireless router. In larger jets, the sysem can scale up to provide complete CMS, IFE and connectivity sysems. eConnect is PED-based. Cabin controls, streeming IFE and satcom connectivity are all controllable via any wireles PED — iPad, Android, Windows, Blackberry or eReader devices. User interface is HTNL5-based rather than App-based. This means that the "web app" flies with with aircraft. No pre-downloading of and app required. This also insures it will work across all PEDs not just Apple or Androids.
Esterline CMC 600 Dr. Frederick Phillips Blvd. Montreal, Quebec H4M 2S9 Canada (514) 748-3184 Fax: (514) 748-3100 **cmcelectronics.ca**	**SatLite Inmarsat high-gain antenna system**	Inmarsat compatible antenna, for SwiftBroadband, Swift64/128, Inmarsat Aero H/H+	Compact ARINC 781 antenna system for single-channel voice and data. Facilitates Aero H/H+ Swift64 Services. Ideal for narrow-body air transport and larger business jet aircraft applications. $79,104
	CMA-2102LW Inmarsat high-gain antenna	Inmarsat compatible antenna, Swift64/128, Inmarsat Aero H/H+	New lighter-weight ARINC 741 SwiftBroadband antenna system for multichannel (3) voice and data. $143,717
	CMA-2102SB Inmarsat high-gain antenna	Inmarsat compatible antenna, Swift64/128, Inmarsat Aero	New lightweight ARINC 741/761 antenna system for multichannel (3) voice and data. $143,717.
	CMA-2200SB Swift-Broadband Satcom Intermediate Gain Antenna	See Remarks	Top-mounted antenna with diplexer/LNA (and integral ARINC 781 beam steering unit) provides global coverage with no blind spots (keyholes); a design that virtually eliminates multipath interference. Supports multichannel operations, supports Aero-1 satellite communications serices. Upgrade for existing CMA 2200 users.
	CMA-2102 Satcom High Gain Antenna System	Inmarsat Aero-H, Aero-H+ and Swift64 single- and multichannel satcom antenna	High-gain phased array antenna providing hemispherical coverage in a single, low-profile installation. No coverage blind spots. Installation related items such as adapter plates, connector kits and racks available for a wide variety of aircraft types.

INFLIGHT COMMUNICATIONS & ENTERTAINMENT SYSTEMS

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Flight Display Systems 1765 Grassland Pkwy. Alpharetta, GA 30004 (678) 867-6717 Fax: (678) 867-6742 **FlightDisplay.com**	**Flight Display Moving Map**	Cabin video	Provides real-time flight information to passengers, such as present position, altitude, destination, speed, time en route, etc. Worldwide city database features NASA satellite images. Map sequences through three adjustable zoom levels showing realistic Earth images and over one million cities and points of interest. Customers can add company logos, Welcome Aboard screens and custom waypoints. Availaable in ARINC 429 or RS-232 input versions. $6,890 to $8,875.
	Flight View Cameras	Cabin video	Camera shows passengers taxi, takeoff and landing on all cabin monitors in high-resolution color. Camera installs on aircraft glareshield. $1,375 to $1,925.
	HD LCD Monitors	Cabin video — can be used with any video source	Available in 17-, 20-, 26-, 32-, 42- and 52-in. for bulkhead mounting. Many more ceiling and slide mounts available. High definition (HD) with HDMI inputs. Nonreflective glass and wide viewing angles. Infrared remote included, also RS-485 control. NTSC and PAL automatic switching up to 1080p.
	Wireless Audio Transmitter	Cabin audio — two, three or five channels	Provides multiple channels of wireless audio entertainment throughout the cabin of any aircraft. Digital surround sound with different headset options. Transmitter, $1,129 to $2,958; headphones, $145 to $250.
	Cloud CMS Support Software	Virtual support for cabin electronics	Software enables Flight Display Systems' engineers to troubleshoot, upgrade, or modify all aspects of the Cabin Management System via any PC laptop with a Wi-Fi or 3G connection. Free to all new FDS cabin management system customers.
	iPad Arm Mount	iPad dock to replace legacy LCD monitors	$2,533 drop-in replacement. Available in both black and almond text color to match standard aircraft interiors, and comes with a two-year warranty. Tall and Long versions of the iPad Arm Mount are also available.
	GSR 56	Global Satellite Datalink via Iridium network	Supplies on-demand satellite weather when operating internationally. Weather data includes Meteorological Aviation Reports (METARs) that provide current temperature, dew point, precipitation, wind speed and more, as well as Terminal Aerodrome Forecasts (TAFs) that show predicted weather for up to 30 hr. in advance. Throughout most of Europe, Canada and the U.S., the GSR 56 can also receive high-resolution radar imagery, which displays in full color on the G3000, G1000 and G600/G500/G500H series of displays. Additional radar coverage areas are being added continuously. Can be used to provide two-way text messaging via Short Message Service (SMS) to any compatible phone or e-mail address (currently available in the G3000 and G1000 only). In addition, users can make and take calls while in flight–the GSR 56 integrates into aircraft's audio/intercom system, enabling flight crew and passengers to speak and listen directly through a headset. Continuously monitors aircraft's status enroute. It can automatically provide GPS-referenced position reports at predetermined intervals so those on the ground can easily track the flight's status and position.
	HIgh Definition Backbone	See Remarks	HD switches, converters and splitters.

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Flight Display Systems 1765 Grassland Pkwy. Alpharetta, GA 30004 (678) 867-6717 Fax: (678) 867-6742 **FlightDisplay.com**	**High Definition Sources**	See Remarks	Two new Blu-ray players feature a front slot which allows for mounting on various angles withing the aircraft. Jet Juke Box's 5000GB of internal storage space has engough memory for over 100 DVD movies or thousands of audio tracks or potos.
	High-Definition Glareshield color camera	See Remarks	When mounted in the cockpit of an aircraft, this camera will provide passengers with the opportunity to observe taxi, takeoff and landing. The camera produces 1080p output at 30 frames per second and 720p at 60 frames per second via HD-SDI. The effective pixel resolution is 1944 x 1092. Optics include a 6 mm, f=3.6 lens. The minimum illumination is 0.1 Lux. Mounting included.
Flightcell International 98 Vickerman St. P.O. Box 1481 Nelson 7010 New Zealand +64 3 5458651 **Flightcell Australia** Freemantle Western Australia +61 435 425 827 **flightcell.net**	**DZM2**	Secure global voice, data and flight tracking	Flightcell's DZM2 communications hub delivers secure, user-configurable two way voice and data communications via Iridium satellite or cellular phone, plus sophisticated "smart" flight tracking, anywhere in the world.
	DZM3	Secure voice, data and GPS tracking	Two-way voice and data communications via an Iridium satellite transceiver inside the control head. Data connectivity via connected laptop for text messaging, email and internet. All electronics are installed in the one panel mounted control head – nothing to go in the avionics bay, and minimal wiring. Two year warranty.
	FlightCell Pro	Portable communications hub	Connects multiple devices to intercom system and delivers high-quality audio. For use with satellite and mobile phones, aviation and non-aviation radios, iPod and MP3 music players, video cameras and laptop PCs. Wireless connectivity to Bluetooth enabled phones.
Garmin International 1200 E. 151st St. Olathe, KS 66062 (800) 800-1020 (913) 397-8200 **garmin.com**	**GDL 69A XM Radio Receiver**	Cockpit weather and audio entertainment	Provides XM Satellite weather to aircraft navigation system. For audio entertainment in the cockpit, the sound-enabled GDL 69A also provides Sirius XM satellite radio.
Goodrich Four Coliseum Centre 2730 W. Tyvola Rd. Charlotte, NC 28217-4573 (704) 423-7000 Fax: (704) 423-7002 **goodrich.com**	**Inflight Entertainment — Digital Audio**	See Remarks	Solid-state MP3 audio reproducer units with large-capacity solid-state memory and CD audio reproducers designed for commercial aircraft passenger entertainment systems. Both are capable of user-programmable mapping and output of 16 audio channels and allow more than 30 hr. of audio content. Servers allow front loading of media content and offer "plug and play" replacement for existing audio reproducer units.
	Inflight Entertainment — Digital Video	See Remarks	Designed for commercial and corporate jets, and manufactured with both solid-state and hard disk memory. All units are capable of simultaneously playing back two languages to allow greater audio flexiblity for multinational venues. Commercial video reproducers allow airlines to use pre-encoded video material and support both PAL and NTSC video sources and composite and S-video outputs.

INFLIGHT COMMUNICATIONS & ENTERTAINMENT SYSTEMS

Manufacturer or Service	Model/System/Service	General Capabilities	Remarks
Heads Up Technologies 2033 Chennault Ste. 100 Carrollton, TX 75006 (972) 980-4890 Fax: (972) 980-4843 **heads-up.com**	**PBS250**	Passenger Briefing System	Plays up to eight different messages to aircraft passengers with studio-quality. Safety information such as takeoff, landing, turbulence and rapid decompression briefings as well as Frequent Flyer programs and promotional messages are possible. The PBS250 can interface with other onboard systems to provide fully automatic messages. New messages are uploaded in the field using a laptop computer. Certified for CFR Part 21, RTCA/DO-160D, and RTCA/DO-178B, Level D.
	PBS400	Passenger Briefing System	This solid-state unit provides an unlimited number of messages to passengers in up to four languages. The system can interface with other aircraft systems for fully automatic message capability. New messages are downloaded in the field using a laptop computer. Certified for CFR Part 21, RTCA/DO-160B and RTCA/DO-178A, non-essential criticality.
	PBS600 Digital Prerecorded Announcement Machine (PRAM)	Passenger Briefing System	Provides studio-quality passenger briefings in up to 63 languages. Safety briefings may be automatically or manually triggered. Optional boarding music is possible. Certified for CFR Part 21, RTCA/DO-160B and RTCA/DO-178A, nonessential criticality.
	Lumin	Cabin management and entertainment system	Integrates control of cabin lighting, enertainment systetms, briefing systems and switch panels. Fiber optic-based, with distributed processing. Wireless and digital content management.
	Premiere/Executive	Cabin management and entertainment system	Designed specifically for small to midsize cabins. The Premier version supports up to four independent passenger controls, while the Executive version provides capacity for eight. Passengers can select between audio and video sources, such as Blu-ray players, gaming equipment, satellite radio, MP3's and more. The passenger control panel has an integrated headphone jack and can be plated to match existing interiors. All HD monitors support wide-screen formats. Satellite radio is an option, and an auxiliary panel provides for other media, such as gaming equipment and other personal audio/video entertainment devices.
Honeywell Aerospace 21111 N. 19th Ave. Phoenix, AZ 85027 (800) 872-7739 Int'l.: (602) 436-5977 **honeywell.com**	**Ovation C-Series Cabin Management System (CMS) with Select 200C PCU Upgrade**	Built around a bidirectional Controller Area Network (CAN) data bus backbone.	System's icon-based, touchscreen PCU dock operates all of the cabin's audio and video sources, including lighting, temperature, window shades and galley functions from the comfort of the passenger's seat. This PCU is a form-fit-function, pin-for-pin replacement for the existing MHL4 PCU. While the MHL4 is a four-line LCD controller, the Select 200C provides an intuitive, icon-based touchscreen that implements a slide-and-select technology, much like that of an Apple iPod Touch.
	Ovation C-Series Cabin Management System (CMS) Cup Holder Media Dock Upgrade	By replacing an existing cup holder location with this Cup Holder Media Dock, the passenger's iPod or other MP3 player is integrated with the CMS.	Operating under license from Apple, this removable device fits into any existing cup holder location and integrates iPod or MP3 players with installed speakers, monitors and control devices (PCUs and touch screens). The Dock charges the iPod, distributes its audio and video across the CMS, provides an auxiliary audio/video 3.5 mm input jack for non-iPod devices and comes with a standard USB connector to charging auxiliary devices.
	MCS-4200/7200 Satcom with Swift64 and SwiftBroadband	Inflight email, Internet and corporate network access	Joint Honeywell/Thales satcom offering cabin communications and digital voice connection with ATC for the flight crew. Includes a 5 MCU satellite data unit (SDU), a 4 MCU (Aero-I) or an 8 MCU (Aero-H+, Swift64 and Swift-broadband) high-power amplifier and a 4 MCU high-speed data unit.

INFLIGHT COMMUNICATIONS & ENTERTAINMENT SYSTEMS

Manufacturer or Service	Model/System/Service	General Capabilities	Remarks
Honeywell Aerospace 21111 N. 19th Ave. Phoenix, AZ 85027 (800) 872-7739 Int'l.: (602) 436-5977 honeywell.com	**JetMap II**	Moving map and information system for passengers to monitor their flight progress and other features. Integrated handheld remote control included. A USB port on the front of the device facilitates the rapid download of the newer databases.	Enables passengers to monitor their flight progress with high-resolution, worldwide terrain maps (and street-level maps in the U.S.), as well as flight path tracking, time to destination, altitude, speed, heading and other features, such as Sun Maps. Relative Location Indicator (RLI) depicts direction and distance to nearby cities. Night Graphics Setting provides easy viewing in a darkened cabin. Customizable features include corporate logos and multi-language audio and video safety briefings. Using its own embedded Iridium transceiver or an already installed satcom system, JetMap II can provide the latest headlines, financial news, sports and weather. By overlaying up-to-the-minute headlines with flight and route information, passengers can view complete news stories, review individual stock prices and market updates, and get current weather conditions.
	Ovation Select Cabin Management System (CMS)	All-digital CMS for light to VVIP business aircraft	Second-generation, Ethernet-based CMS incorporating HD video, surround sound, 3DHD moving map, touchscreen technology and architecture for light to VVIP business aircraft.
	MCS-7120	Inmarsat compatible, Aero H/H+ (one voice + one data), Safety Services Certified, Swift64 (two channels) or SwiftBroadband (one channel)	The company's latest satcom terminal provides voice and high-speed data. Offers one Classic Aero channel, one Packet Data channel and either two channels of Swift64 or one channel of SwiftBroadband. Offers high-speed transfer for both cockpit communication (Aero H/H+, EFB, Safety Services, AFIS data) and cabin communication systems (voice, Internet, Ethernet, fax).
	MCS-7147	Inmarsat compatible, Aero H/H+ (three/six voice + one data), Safety Services Certified, Swift64 (two channels) or SwiftBroadband (two channels)	Upgrade hardware for any existing Honeywell MCS-4000 or MCS-7000 system. This system is a retrofit upgrade to add Swift64/SwiftBroadband capability by replacing only the HPA, leaving the existing SDU/RFU. The HD-710 is a drop-in replacement for the HPA. To utilize Swift64/SwiftBroadband capabilities requires only wiring additions.
	MCS-7163	Inmarsat compatible, Aero H/H+ (two/five voice + one data), Safety Services Certified, Swift64 (two channels) or SwiftBroadband (two channels)	Upgrade hardware for any existing Honeywell MCS-6000 or MCS-3000 system. This system is a simple retrofit upgrade to add Swift64/SwiftBroadband by just replacing the HPA. The main benefit of this retrofit upgrade is the SDU/RFU remain the same. The HD-710 is a drop-in replacement for the HPA. To utilize Swift64/SwiftBroadband capabilities requires only wiring additions.
	Communication Gateway System	Multiple Ethernet interfaces; integrated Wireless Access Point (WAP) capability (IEEE 802.11 a/b/g standards), connected or remote antenna, VoIP capable; USB power for charging carry-on electronics; flexible installation options	Comprised of two LRUs — the CG-710 and the CR-710 — the Communication Gateway System combines three functions into one system. The CGS provides IP PBX, airborne networking, data acceleration/compression and an onboard cabin network enabling passengers to surf the Internet, send/receive email and host videoconferences. Multiple telephone calls can be made and received on and off the aircraft via wired or wireless handsets using the IP PBX functionality.
	Aspire Wired and Wireless Handset	See Remarks	Multi-functional handset offers Indline uality voice and integrated touch screen for additional capability. Flexible installation options with drop-in and flush-mound cradles that support both phone types. Works as a phone and a platform for cabin environment control, such as dimming lights.
	Aspire Portable AirMail	Allows up to four passengers to send and receive email with the own BlackBerry	Aviation grade noise canceling mocrophone and Bluetooth handset integration. Custom ringtones, screens and logos.

INFLIGHT COMMUNICATIONS & ENTERTAINMENT SYSTEMS

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Honeywell Aerospace 21111 N. 19th Ave. Phoenix, AZ 85027 (800) 872-7739 International: (602) 436-5977 honeywell.com	**eNfusion CCU-100 Communications Convergence Unit**	Allows multiple users to make calls and access the Internet simultaneously	Developed as an aircrafat certified networking device for multi-port routing, a Wi-Fi access point and PBX for cabin telephony. Supports multiple wireless cabin handsets, concurrent data and voice connections, and can be joined with additional CCU-100 units to increase the number of concrrent users possible. The CCU-100 eliminates the need for purchasing disparate hardware components.
	eNfusion CCU-200 Communications Convergence Unit	Allows multiple users to make calls and access the Internet simultaneously	Supports multiple wireless cabin handsets, concurrent data and voice connections and can be joined with additional CCU-200 to increase the number of concurrent users. The CCU-200 eliminates the need for purchasing disparate hardware components. Compatible with a variety of satellite- and ground-based services (Swift64, SwiftBroadband and Iridium)
	eNfusion CNX-100 Airborne Router	Internet router and Web interface	Provides cabin network functions with a power source and a Web-based interface. Network functions include eight Ehernet port, an Ethernet switch and 802.11G wireless access point, a VPN end point and a stateful inspection firewall. Enables basic private network connectivity. Compatible with a variety of satellite- and ground-based services (Swift64, SwiftBroadband and Iridium)
	eNfusion CNX-200 Network Accelerator	See Remarks	Provides cabin network functions with a power source and a Web-based interface. Network functions include Network functions include eight Ehernet port, an Ethernet switch and 802.11G wireless access point, a VPN end point and a stateful inspection firewall. Features excclusieve. Expand compression and acceleration for enhanced performance.
	eNfusion NWAP	CWLU & TWLU wireless access point	Incorporates a Cisco Aironet 1252 802.11 a/b/g/n access point, multiple-input and multiple-output (MIMO) capability of 802.11n and a gigabit Ethernet interface. The unit can operate as a cabin wireless LAN unit (CWLU) — wireless to passengers and crew or a terminal wireless LAN unit (TWLU) wireless to the gate.
	eNfusion WAP	Wireless Access Point	Incorporates a Cisco Aironet 1200 series 802.11 a/b/g access point with a multiport Ethernet switch to provide an avionics-class wireless access point for passengers and crews. The ARINC 763 compliant product can operate as a CWLU or TWLU, while offering flexible configugration options to meet application specific requirements.
	MCS-4200/7200 Satcom with Swift64 and SwiftBroadband	See Remarks	Includes a 6 MCU satellite data unit (SDU), an 8 MCU high-power amplifier and a 4 MCU high-speed data unit. Comes with a unique feature called voice pacifiers, which provide connection information as a call is being processed.
	AIS-2000 Satellite Television	Provides multi-region coverage of live televised news, sports, weather and movies in selected areas around the world	Programming and content supplied by DirecTV (USA) and various free-to-air and subscription services throughout the world (Europe, Africa, Middle East, India, Russia and China). The system provides six independent channels and the capability of hosting up to three receiver modules at any one time, each with two receiver cards.
IDAIR GmbH Wegbeim jager 193 22335 Hamburg, Germany +49 40 5070 69416 **idair.aero**	**Global Communication Suite**	Cabin Management and Entertainment System	A joint venture between Lufthansa Technik and Panasonic Avionics Corp. Couples Lufthansa Technik nice system and Panasonic Avionics X series together with its Global Communication Suite (eXphone, eXconnect and eXTV).

INFLIGHT COMMUNICATIONS & ENTERTAINMENT SYSTEMS

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IMS Entertainment 2929 E. Imperial Hwy. Brea, CA 92821 (714) 854-8600 Fax: (714) 854-8723 **imsco-us.com**	**Edge**	Portable IFE device	10.1-in. screen size, 1280 x 800 resolution, Android OS, built-in browser and e-reader, 3.5mm headphone jack, 1 GB RAM, 1GHz dual-core processor, Lithium ion battery. Battery life: up to 7 hr. (video); optional battery: up to 20 hr. (video); Wi-Fi 802.11 a/b/g/n, Bluetooth 3. Video playback: MPEG4 and H.264; audio playback: MP3 and AAC, offers a wide variety of content options from all major Hollywood and independent studios. WAEA Specification 0403 compliant.
	RAVE (Reliable Audio Video Entertainment)	Multi-seat portable IFE player system	The seat display unit features a single LRU in the seat with 4 Terabyte capacity, available in 17-, 15-, 12-, and 9-in. display sizes with capacitive touch HD screens. No distribution boxes or headend servers. Dockable seat display is replaceable inflight. Lithium Ion battery life up to 5 hr (video). Solid stae memory with removable SD or permanent available. WAEA Specification 0403 Compliant. The system control unit uses a single LRU in the head-end, requiring less than 50 watts and 3.5 Kg. Provides 12 Terabyte capacity with built-in "load and go" content loading; wireless on/off aircraft data transfer at the gate.
	Terminal Data Loader	Wireless data loader	Terminal Data Loader is an onboard loader, featuring both embedded and wireless load/offload technologies, allowing operators to eliminate costly labor time, guarantee content security and offer the most timely content available. Also available is a self-contained Universal Portable Data Loader featuring gigabit loading speeds while eliminating the need to physically install it on the aircraft.
	Turnkey Content Service	End-to-end content delivery and management service	Turnkey portable and in-seat cabin entertainment service features motion pictures, television, audio, games and news with multiple daily updates. IMS qualifies for Early Window content support from every major studio and independent content provider worldwide. Company claims licensing agreements to ensure the lowest license fees and content management costs. Services include content set design, content selection and licensing, content aggregation and integration, encoding, encryption, DRM and key management, as well as ground support.
Inflight Peripherals Elm Lane Calbourne, Newport Isle of Wight PO30 4JY United Kingdom +44 (0) 1983 555 900 **ifpl.com**	**Numerous**	Cabin electronics interface devices	Designs and manufactures cabin audio jacks, data ports, monitor arms, seat consoles and PCU's, docking stations, mediahub, test equipment, near field communication, breakaway jack, and self-testing audio jacks. Company also provides custom product engineering.
Innotech Aviation 10225 Ryan Ave Dorval, Quebec H9P-1A2 Canada (514) 636-8484 Fax: (514) 636-2323 **innotechaviation.com**	**I-Ku Airborne High-Speed Internet System**	Worldwide Ku broadband satcom	Wireless cabin entertainment and management system integrated with the Apple iPad and Ku Band Internet. Fixed $6,000 monthly service fee for unlimited worldwide access via ViaSat Yonder network service. Weighs less than 45 lb.
Innovative Advantage 15337 NE 90th St. Redmond, WA 98052 (206) 910-7528 Fax: (425) 869-1936 **in-advantage.com**	**AVDS**	High-bandwidth cabin audio/video network system	Provides HD AV switching over fiber optics around the aircraft cabin. HD-SDI, DVI-D, Component, Composite and VGA signals are supported. Digital audio, Dolby Digital, DTS pass-through and analog audio is supported.

INFLIGHT COMMUNICATIONS & ENTERTAINMENT SYSTEMS

Manufacturer or Service	Model/System/Service	General Capabilities	Remarks
International Communications Group 230 Pickett's Line Newport News, VA 23603 (757) 947-1030 (800) 279-1991 Fax: (757) 947-1035 **intcomgrp.com**	**ICG NxtLink Series ICS-100**	Iridium transceiver	Incorporates a single-channel Iridium transceiver with CTU features, providing a stand-alone, comprehensive communications system with optional internal fax.
	ICG NxtLink Series ICS-200	Dual Iridium transceivers	Incorporates dual Iridium transceivers with an internal CTU, providing a stand-alone, comprehensive communications system that can operate over a single coax and Iridium antenna with optional internal fax and ACARS capabilities.
	ICG NxtLink Series ICS-120A	Dual voice/data transceiver	A dual transceiver device that has a dedicated channel of global voice and dedicated data service with a separate Short Burst Data (SBD) channel in a single, 2 MCU LRU.
	ICG NxtLink Series ICS-220A	Dual voice/data transceiver	A dual transceiver device that has a dedicated channel of global voice and dedicated data service with a separate Short Burst Data (SBD) channel in a single 2 MCU LRU.
	ICG NxtLink Series ICS-400	Iridium multi-transceiver	Incorporates four Iridium transceivers with an internal CTU, providing a stand-alone comprehensive communications system with connectivity to other aircraft systems via CE PT-E1.
	ICG NxtLink Series CIS-100	Iridium/GPS flight tracking	Core Iridium System incorporates a single-channel Iridium transceiver and an internal GPS receiver for Automatic Flight Following with built-in CTU features.
	ICG NxtMail Server	Cabin wireless access point	Provides a local Wireless Access Point (WAP) in the aircraft cabin permitting Wi-Fi-capable personal devices such as a BlackBerry or iPhone to access conventional Internet Protocol (IP)-based terrestrial services for the purpose of sending and receiving e-mail and mobile Web browsing.
	ICG AeroCom 1100	Multifunction communications management	A 2 MCU device that provides communications automation, medium integration, transceiver management facilities and PABX functions for aeronautical applications.
	ICG AeroCom 3000	See remarks	A complete telecommunications system designed for aeronautical applications where larger device capacity is required and future expansion of user devices or the addition of communications systems is anticipated.
	ICG Sigma-7 BL (Backlit) Handset	Satcom handset	Features including backlit buttons and LCD, noise-canceling microphone, speed dialing, last number redial and mute make the Sigma-7 handset versatile yet convenient and simple to use.
	ICG Sigma-7 Retractor Reel Handset	Satcom handset	No external power is required other than a telephone circuit connection. This telephone, with the option of two-wire or four-wire, provides the familiarities and conveniences users are accustomed to when using a telephone.
	ICG JetPhone Flight Deck Handset (Two-Wire and Four-Wire)	Satcom handset	A corded, two- and four-wire handset developed for general aviation and air transport applications.
	ICG DECT Cordless Handset (Two-Wire and Four-Wire)	Satcom handset	Cordless handset adapted for aeronautical applications. This device was developed to make it compliant with requirements for fire retardancy and emissions.

INFLIGHT COMMUNICATIONS & ENTERTAINMENT SYSTEMS

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InTheAirNet 2201 Alton Parkway Irvine, CA 92606 Phone: (949) 442-2300 Fax: (949) 442-2302 **intheairnet.com**	**THER Aircraft Control Module (ACM)**	Cabin Management System Hub	Enables the Ther (Transporting Home Experience Reliably) system to control business jet cabin systems. With a multiple digital, analog and intelligent inputs and outputs, the ACM seamlessly integrates lights, shades, temperature control, entertainment control and more into one system.
	THER Aircraft Embedded Display (AED)	See Remarks	Serves as a controller and video display unit for the passenger. AED can be mouned in multiple locations. A single, 6-wire connection between the AED and the APE provides conotrol and data connunication, on-demand audio and video, and power. Passengers control system through the projected capacitance touchscreen inerface. Natively running the Android OS, the AED offers many features found on smartphones and tablet devices.
	THER Aircraft Interface (AIM)	See Remarks	Provides a single point of connection between aircraft keylines, ARINC 429 data busses and/or GPS data sources to generate moving maps, and interfaces with aircraft passenger service systems for reading lights and attendant call functions. Receives power and data connections to the THER system through a single, 6-wire connection to the APE.
	THER Aircraft Node Module (ANM)	See Remarks	Provides a video/audio source for lare format or legacy video monitors. Supports many vido output formats. Natively runs the Android OS and through communications with PEDs, FAPs or other control inputs points, provides the passenger or flight crew with full control over video displayed on the attached monitor. A single, 6-wire connection between the ANM and the APE provides control and data communication audio and video and power.
	THER Aircraft Power Entertainment (APE)	See Remarks	Provides up to 10 passengers with power, audio and video on demand, and connectivity. Compatible with both Passenger Interface Ports for passengers to use their own smartphones or tablets, AEDs and ANMs, the APE drives content and connectionn to all video devices on the aircraft from a single LRU. Stores the media content (audio and Video), attaches directly to aircraft power and interfaces directly with a WAP or bidirectional off-aircraft Internet connection.
	THER Flight Attendant Panel (FAP)	See Remarks	Provides system control, including system-, section- or seat-based enabling or disabling of features and content. It provides system status, including both configuration and health data. If provides a convenient location for onboard content updating. A single, 6-wire connection between the FAP and the APE provide control and data communication and power.
	THER Passenger Control Unit (PCU)	See Remarks	Provides a single passenger interface point for connecting their smartphone or tablet device, listening to onboard audio through the headphone jack and both control and status of passenger services including reading lights and attendant call. A single, 6-wire connection between the PCU and the APE provides control and data communication, on-demand audio and video and power.
	THER Passenger Interface Port (PIP)	See Remarks	Provides two standard USB-type A sockets for passengers to plug into their smartphone cables. One provides a full USB connection to the THER system, including standard USB power and full delivery of data, on-demand audio and video. The second USB socket provides a high-current source for rapid battery charging or provides additional power for power-hungry tablets.

INFLIGHT COMMUNICATIONS & ENTERTAINMENT SYSTEMS

Manufacturer or Service	Model/System/Service	General Capabilities	Remarks
OnAir Av Louis-Casaï, 71 P.O. Box 42 1216 Cointrin Geneva Switzerland +41 (0) 22 747 6459 Fax: +41 (0) 22 747 6852 **onair.aero**	**THER Wireless Access Point (WAP)**	See Remarks	Acts as 802.11 a/b/g/n Wi-Fi hotspot, with three antenna connections. A single, 6-wire connection between the WAP and the APE provides control and data communication and power.
Iridium Communications 6707 Democracy Blvd. Ste. 300 Bethesda, MD 20817 (301) 571-6200 Fax: (301) 571-6250 **Iridium.com**	**Numerous**	Numerous satelllite phones, transceivers and ancillary products for mobile communications	Company website lists numerous products from other OEMs whose products use Iridium satellite communications network services.
Jeppesen North America 1-800-353-2107 Direct: (303) 799-9090 Outside of North America: +49 6102 5070 **jeppesen.com**	**JetPlan.com with Satcom Direct**	Communications for business aviation	This service provides Jeppesen's flight planning and data link communications via Satcom Direct's (see listing) FlightDeck Freedom offering. Features include automated movement reports (takeoff and landing) and aircraft messages via e-mail or phone, digital ATIS, pre-departure clearances (in United States), oceanic clearances, global flight tracking, exclusive Satcom Direct access to real-time Plane Simple data from the flight deck and website access for account management. Additional Jeppesen services available include EasyBrief.com, Powerloader, eLoadsheet, International Trip Planning, World Fuel service, Ground Handler network, flight crew training course content, Jeppesen Navsuite and electronic charts.
Lufthansa Technik AG Innovation Business Unit Weg beim Jager 193 22335 Hamburg Germany +49-40-5070-2665 Fax: +49-40-5070-65024 **lufthansa-technik.com** **nice-system.com**	**niceview Moving Map System**	Moving map displays	Provides passengers with photorealistic 2-D and 3-D views referencing virtual camera views from around the aircraft and along a virtual flight path. Users can see lifelike views through the cockpit and cabin windows. Pictures and movies can be displayed with multichannel audio. Other features include background MP3 audio replay (e.g. boarding music, logos, welcome screens), customizable geopolitical, graphical and information overlays, configurable viewing sequences for different flight phases and geographical locations, news and information, 2-D and 3-D indicator paths to locations relative to the aircraft, selectable transitions between views and illustrations of oceanographic data. The niceview is configured from 4 MCU or 1/2 ATR short LRUs requiring 28 VDC power; RTCA DO-160E for Airbus and Boeing aircraft, in ARINC 600 and 404 configurations.
	TIOS (Two-In-One-Solution)	Integrated satcom and satellite TV antenna installation on vertical stabilizer radome	Also provides location for installation of a forward-looking camera.
Lufthansa Technik AG Innovation Business Unit Weg beim Jager 193 22335 Hamburg Germany +49-40-5070-2665 Fax: +49-40-5070-65024 **lufthansa-technik.com** **nice-system.com**	**Mobile Access Router (MAR)**	Internet, email, Web/fax/print server	Can be installed either as stand-alone or as part of Lufthansa Technik inflight entertainment and cabin management system nice (networked integrated cabin equipment), which then functions as the primary external communications interface to all devices on the cabin network. Features modular architecture, ISDN/MPDS data communication paths, analog fax connectivity, wireless access point, virtual LAN capability, Web interface control and ARINC 429 interface. 4 MCU, 6 kg (13.22 lb.); three optional configurations. Future features will include broadband (BGAN, SwiftBroadband) and data compression/acceleration capabilities.
	ViaSat	Mobile broadband	Provides operator with Internet broadband throughput speed when connected to a Lufthansa Technik Mobile Access Router and nice (networked integrated cabin equipment) suite. The MAR links passengers to ViaSat's mobile broadband system via an Ethernet network. ViaSat offers a range of antenna products. The existing tail-mount dish antenna is suitable for many heavy transport-category and midsize to large business aircraft, while a phased array fuselage-mount antenna is under development for light to midsize business aircraft.

INFLIGHT COMMUNICATIONS & ENTERTAINMENT SYSTEMS

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MEZZO 26-28 Hammersmith Grove London W6 788 England +44 (0) 208 834 1822 Fax: +44 (0) 208 834 1128 **mezzoglobal.com**	**See remarks**	Portable and seatback cabin entertainment systems and cabin screens	Portable players include Apple iPad, ARCHOS 5 Internet tablet, eVU Player, Grand Tourer (GT) Player, Sony PSP 3000. The MezCo Entertainment System is Mezzo's semi-embedded IFE system. Company offers a range of headphones, from cost-effective disposables to the premium active noise cancelling headphones.
OnAir Av Louis-Casaï, 71 P.O. Box 42 1216 Cointrin Geneva Switzerland +41 (0) 22 747 6459 Fax: +41 (0) 22 747 6852 **onair.aero**	**MobileOnAir**	See remarks	Enables passengers to use mobile phones and smartphones (e.g. BlackBerry, Apple iPhone, HTC) for voice calls, email, text messaging and Internet access during a flight.
	InternerOnAir	See remarks	A managed network service that uses OnAir's distribution agreement for Inmarsat SwiftBroadband (SBB) service. In addition to the SBB avionics and corresponding antenna, the by-default assumption is that the service will run on an aircraft equipped with an appropriate platform, including a communications manager that prioritizes the use of the SBB link by the different onboard applications. The InternetOnAir service includes managed SBB communications to and from the aircraft, at competitive price packages; 24/7 customer support of managed network; and itemized billing and reporting for all SBB usage, allowing the operator to recharge third-party onboard application providers for their use of the SBB services.
Otonomy Aviation 1 rue du Bocage 33200 Bordeaux France + 33 (0) 557 892 558 Fax: + 33 (0) 557 892 163 **otonomy-aviation.com**	**Parabellum**	Video aircraft security systems	High Definition cameras (tail, doors, panels, wheel wells), wireless reed switch sensors, wired and wireless motion sensors, a touchscreen onboard interface, fingerprint/RFID authentication, and a remote video security center provide aircraft security system. System can be remotely monitored by user via Internet. Available in four levels of capabilities. Cams can be tied to existing entertainment system. DO 160/ DO 178 qualified.
Panasonic Avionics Corp. 26200 Enterprise Way Lake Forest, CA 92630 (949) 672-2000 Fax: (949) 462-7100 **panasonic.aero**	**eXConnect, eXPhone, eXTV, eXW and eXlite**	See remarks	eXConnect provides two-way broadband connectivity supporting a wide range of passenger and crew applications, including Internet access, voice, data, and the ability to monitor and transmit airline operational data in real time at speeds of up to 50 Mbps to the aircraft. eXPhone allows passengers to use their mobile phone, Smartphone or BlackBerry to call, text, email, and browse and use other applications. eXTV television network delivers television Ku-band programming to passengers during their flight. eXW, available either as a standalone system or as an enhancement to other Panasonic IFEC products, is a wireless network delivering IFE to enable passengers to access services such as on-board movies, music, news, and in-cabin services, all through a personalized portal on their own Wi-Fi-enabled laptop, tablet, smartphone or other PED. eXLite, is targeted at all aircraft types. eXLite is Panasonic's lightest weight and lowest power X Series system. Depending on configuration, the system can weigh as little as 3.2 lb. per passenger seat.
Planebill Rome, Italy +39 069424988 Fax: +39 069422056 **planebill.com**	**Numerous**	integrated Web- and mobile-based onboard services and billing	Web applications for passenger's laptops and netbooks include onboard portals for passengers and crew members, providing access to onboard connectivity, e-commerce, food and drink ordering, business support, info services and IFE. Billing can be applied to all services/passenger combinations. Planebill's Mobile Applications use the capabilities of passenger's PDA's, smartphones and tablets. PlaneRoaming product enables passengers to communicate using their own mobile number without the need for an on board cellular infrastructure. CrewPortal allows also summary reports and communication with ground personnel for operational or administrative procedures including security. PlaneBill has developed most of these applications for the iOS, Android, Windows (Mobile/7), webOS, Symbian and BlackBerry.

INFLIGHT COMMUNICATIONS & ENTERTAINMENT SYSTEMS

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Rockwell Collins 400 Collins Rd., N.E. Cedar Rapids, IA 52498 (319) 295-1000 Fax: (319) 295-2297 **rockwellcollins.com**	**Airshow 410**	Cabin audio, cabin video, cabin management, moving map/info	Enhanced version is 100% drop-in replacement for Airshow 400. CD-ROM replaced with solid-state flash data loader; two-fold increase in clock speed.
	Airshow 4200D	Cabin audio, cabin video, cabin management, moving map/info Inmarsat compatible	Provides real-time status of the aircraft's position and route, ground-speed, altitude, TTD/ETA, as well as news, nearby points of interest, safety briefings and gate connection information.
	Airshow 4000	Cabin video, moving map/info Inmarsat compatible	Provides real-time flight information and moving maps, news, financials, sports and weather.
	Tailwind 300 Airborne TV system	Cabin audio, cabin video, cabin management, moving map/info Inmarsat compatible	Digital airborne satellite TV for the contiguous United States. Features DirecTV, with over 100 channels of network, movie, music and optional programming.
	Tailwind 500 Tailwind 550 Airborne TV systems	Cabin audio, cabin video, cabin management, Inmarsat compatible	Digital airborne satellite TV for the contiguous United States, Europe and Middle East. Features DirecTV, TPS and/or Showtime in the Middle East programming.
	Numerous	Company offers a range of stand-alone cabin electronics systems including audio/video, high-speed data communications, satcom Swift64 and Rockwell Collins eXchange, and integrated cabin systems	Company's IFE systems provide audio and video content, from overhead systems that deliver preprogrammed content to in-seat systems that allow passengers to select video and/or audio entertainment options. Integrated control of cabin environmental and entertainment functionality, including many third-party vendor controls. Depending on aircraft configuration, galley congfiguration, controls cabin function, including lighting, heating and air conditioning, window shades, water-level readout and entertainment systems. Microprocessor-controlled switches can be reprogramed via software to change source labels or reconfigure existing systems for new applications. Make in-the-field updates using a control access point that allows for system upgrades via a serial port for a laptop computer. Centralized system diagnostics. On-suite and customized training are available.
	See Remarks	See Remarks	Company produces numerous cabin electronics, related hardware and peripherals, including Inmarsat and Iridium high- and intermediate-gain satcom antennas, diplexers, low-noise amplifiers, HD cabin displays, TV systems, source equipment and content.
	Skybox	See Remarks	Skybox integrates and extends the capabilities of Apple's iCloud Home Sharing AirPlay and mirroring for business aircraft cabin application. Enables passengers to share digitally on cabin displays, iPad tablets and other devices. Stream digitally protected Hollywood movies and TV shows from Skybox's on-board Apple iTunes library to your carry-on device. (Skybox requires Inernet connectivity to authenticate a DRM movie or TV show before it plays) Use Skybox's integrated Apple TV to select content from Skybox's library and pay it on a cabin display.
Rockwell Collins 400 Collins Rd., N.E. Cedar Rapids, IA 52498 (319) 295-1000 Fax: (319) 295-2297 **rockwellcollins.com**	**Airshow Moving Map Systems**	Passenger inflight information and moving maps	Compatible with virtually all cabin management systems. Airshow Series provide passengers with an array of viewing options on 3-D maps, combined with relevant flight information. Host of popular features including world clocks, flight instrument panels, tabbed-style navigation menus, 3-D zoom and perspective views, and information tickers. With MyAirshgow.net operator can completely personalize the optiona Airshow Network service.

INFLIGHT COMMUNICATIONS & ENTERTAINMENT SYSTEMS

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Rosen Aviation 1020 Owen Loop S. Eugene, OR 97402 (541) 342-3802 Fax: (541) 342-4912 **rosenaviation.com**	**Displays**	Cabin displays, arms and base receptacle mounting options	Company offers a range of high definition and standar displays in NTSC, PAL, SECAM and RS170 compatible formats.
	Rosenview LX, VX and LXM	Cabin information systems	Provides passengers with an array of information including flight path history, satellite imagery, optional custom audio/video cabin briefings, logo screens, etc., in up to 20 languages. Topographical worldwide coverage including street-level detail for United States or Western Europe.
	Blu-ray DVD Player 0602-001	Blu-ray cabin DVD player	Accepts high definition (Blu-ray) and standard definition discs as well as DVD-R/CD-DA/MP3/VCD/SVCD; HDMI/DVI output; 7.0 in. x 3.0 in. x 7.1 in.; weight, 3.3 lb.; operating power, 28 VDC; four composite outputs; 7.1 audio S/pdif audio and two-channel (stereo) with volume control; control via front panel keys, IR remote, RS-232 or RS-485.
	Dual Blu-ray DVD Player	See Remarks	Accepts high-definition (Blu-ray) and stand definition discs as well as DVD R-/CD-DA/MP3/VCD/SVC/HDMI/DVI output, 2 SDI output, 2 composite outputs; component output (Y Pb Pr), 7.1 audio S/pdif audio and 2-channel (stereo) with volume control; control via front panel keys; IR remote. RS-232 or RS-485; operating power 28 VDC. Models with Media share; 160 GB internal storage drive per player; supports the following file types: WMV9, MP3, WMA, JPG and PNG. Trnsfer content from USB drive to the Dual Blu-ray inernal storage; typical standard definition movie in WMV9 format requires approrximately 2-3 GB of storage.
	Video Distribution Amplifier 0700-006	Cabin video distributor	Automatic gain control for leveling video input signals; briefing override for all video signals; video outputs individually configurable, 28 VDC.
	Headphone Distribution Amplifier 0700-001	Cabin headphone distributor	Three stereo analog audio inputs; one mono microphone input; eight stereo outputs; weight, 0.85 lb; 28 VDC.
	Accessories	Cabin audio/video accessories	Company offers a host of related products including wireless headphones, controllers, retrofit kits, connector kits, audio control box, remote controls.
Satcom Direct, Inc. 1901 Hwy. A1A Satellite Beach, FL 32937 (321) 777-3000 Fax: (321) 777-3702 International: +31-594-501-900 **satcomdirect.com**	**See capabilities**	Company provides comprehensive support for Inmarsat, Iridium, ViaSat and OneView airborne communication services	Working closely with both the Inmarsat, Iridium and ViaSat satellite networks, and Aircell's terrestrial network, Satcom Direct provides operators with seamless global satellite communications and support tools by configuring each operator's satcom system to match the appropriate communications backbone services to the operator's needs and budget. ViaSat Aero uses the Yonder Ku-band mobile broadband service to place and receive cell phone calls, browse the Web, send and receive e-mail, access the company network through a secure VPN and conduct videoconferences. OneView uses the AIS-2000 Multi-Regional Airborne Information System for generic inflight entertainment. Satcom Direct Flightdeck Freedom clients can subscribe to a host of data link services including Jeppesen JetPlan.com (see separate listing) flight planning/tracking/messaging/security monitoring services. Satcom Direct's SD Flight Tracker service offers global fleet tracking via SITA VHF, Inmarsat, Iridium and broadband for tracking, aircraft configuration and profile engineering. The company's OneView service provides access to DirecTV 150+ channels throughout the CONUS airspace and is compatible with Honeywell's AIS-2000 Multi-Regional Airborne Information System and Rockwell Collins' Tailwind 100 and 300 systems. The company also features ongoing seminars on Inmarsat Swift64 and Swift-Broadband communications, Iridium service updates, router and server updates, Honeywell CMTI and Rockwell Avionica kit updates, as well as Satcom Direct support for Global One Number, Aero X, Plane Simple 24/7 administrative and troubleshooting toolkit, BlackBerry update services and a "Satcom Store." Near-term planned upgrades include a patent-pending data acceleration technique for Inmarsat satcom, and AeroV will provide a VoIP gateway service.

INFLIGHT COMMUNICATIONS & ENTERTAINMENT SYSTEMS

Manufacturer or Service	Model/System/Service	General Capabilities	Remarks
Satcom 1 Centerholmen 16, 3. sal DK-2670 Greve Denmark + 45 4615 4546 Fax: + 45 4615 4536 **satcom1.com**	**See Remarks**	See Remarks	Satcom1 is a satellite service provider (Inmarsat, Iridium, KU-band via ViaSat and Thuraya), whose core satcom expertise is for the aeronautical satcom market. The company offers their VIP, business jet and helicopter customer base SwiftBroadband, SB200 and SB X-STREAM, Swift64, inflight cell phones (sms, email), and inflight videoconferencing services. The new Inmarsat portable phone, IsatPhone Pro is available from Satcom1. Satcom1 also supplies portable satcom solutions such as BGAN terminals with Bluetooth and Internet capability, Thuraya and Iridium and similar Inmarsat-C and Fleetbroadband systems for vessels.
Securaplane Technologies 10900 N. Stallard Pl. Tucson, AZ 85737 (520) 297-0844 Fax: (520) 498-4924 **securaplane.com** (Company was acquired by Meggitt plc in April 2011)	**Entertainment Camera Systems**	Down, aft and vertical fin cams, cabin video, cabin security, cockpit door surveillance system	Individually configurable systems are used for applications including flight safety, security, taxi/ground maneuvering and inflight entertainment. A typical system consists of a CAM-11 quad-camera unit, CMZ-01 zoom camera unit, CMX-01 vertical fin camera unit and a VCU-05 video control unit for a total of six camera inputs. Control of the system can be accomplished via RS-485 data bus from the cabin video control system or by keyline control from switch closure to ground. Total installed system weight — including wiring and structure — is less than 20 lb. Other cameras available include glareshield zoom and external fin/belly cams.
	Cockpit Door Surveillance System	See Remarks	Ensures that individuals seeking entry into the cockpit are authorized and not under duress, which requires the ability to not only see the individual requesting entry but also to clearly identify that person. Consists of three or more camers feeing a central processing unit that, in turn, feeds video to the cockpit displays or can drive up to three monitors. Depending on camera field of view and customer mounting location, additional cameras may be installed. Low-light and IR capable. Output in both analog and digital formats.
Skycast Solutions 1300 Dexter Ave. North Ste. 140 Seattle, WA 98109 (855) 487-2988 **skycastsolutions.com**	**TrayVu IFE**	Seat-tray IFE display and interface	IFE system integrated into the tray table. TrayVu features include a customizable Android platform, touch screen key pad and tablet navigation, a solid state tablet computer at each seat, simple installation and maintenance — each unit swaps with two screws and a plug, and no seat modifications are required.
	TrayVu Slim	Seat-tray IFE display and interface	Features a unique and proprietary clip that frees the tray for food or beverages and provides optimal viewing angles. Portable IFE device with dual stand/clip, the product offers still-in-theater movies, new release movies, TV shows, children's programming and more. Units weigh less than 2 lb.
Teledyne Controls 12333 W. Olympic Blvd. Los Angeles, CA 90064 (310) 820-4616 Fax: (310) 442-4324 **teledynecontrols.com**	**AirLAN**	See remarks	Provides wireless connectivity for Electronic Flight Bags, whether standalone or integrated with the onboard network, as well as 3G/4G cellular connectivity as well as a Wi-Fi option. Includes two HSPA+ (Evolved High-Speed Packet Access) modules with up to 21 Mbps (downlink)/5.76 Mbps (uplink) speeds. It also provides fallback capability to HSPA, EDGE and GPRS frequency bands. Additionally, radio module upgrades to 4G technologies, such as LTE and WiMAX, can be enabled. The cellular antenna(s) are attached to the unit, which eliminates the need for fuselage mounted antennas. The inclusion of two radios and SIMs improves availability through redundancy, and enables roaming charges to be minimized, or even eliminated. ARINC 822 compliant IEEE 802.11 a/b/g/n radio capable of operating in both the 2.4 GHz and 5 GHz frequency bands. This WiFi option is compliant with all the latest relevant IEEE and ARINC standards. For Wi-Fi connectivity, a fuselage mounted antenna is highly recommended. Can be connected either directly to the EFBs via navigation system, and data loadable over Ethernet via ARINC 615A.
	AvVisor and AvVisor Plus Information Systems	Cabin audio, cabin video, moving map/info	AvVisor and AvVisor Plus information systems provide real-time flight data and worldwide moving map cabin displays. Designed to operate independently of the flight crew, the system can display information in one-line, four-line and multiple-line formats. Optional customized screen graphics can be changed any time via included remote computer. Users can select map zoom levels to track the aircraft's progress with varying levels of geographic detail. Available in 6.4-in. to 10.4-in.-diagonal AMLCDs. Interfaces include ARINC 429 RS-232/RS-422, analog and Ethernet.

INFLIGHT COMMUNICATIONS & ENTERTAINMENT SYSTEMS

Manufacturer or Service	Model/System/Service	General Capabilities	Remarks
Thales 45 rue de Villiers 92526 Neuilly-sur-Seine Cedex France +33 (0) 1 57 77 080 **thalesgroup.com**	**TopSeries IFE**	See Remarks	Thales's TopSeries IFE system integrates broadband communications, on-demand entertainment and in-seat power to accommodate personal electronic devices. This Web-based system is scalable to any aircraft and has been selected by more than 40 airlines worldwide. Airline passengers can communicate via mobile phone and Internet via the company's flalg-ship connectivity sytstem, TopFlight Satccom. Services include in-seat messaging, information services, real-time transactions and SwiftBroad-band satcom.
TrueNorth Avionics 141 Bentley Ave., Ste. B Ottawa, Ontario K2E 6T7 Canada (613) 224-3301 Fax: (613) 224-0954 **truenorthavionics.com**	**Simphone**	Wi-Fi hotspot/LAN, e-mail, Internet, SMS Inmarsat compatible, SwiftBroadband, fax, Iridium compatible	Single-LRU system serves as both an airborne telephone and an open-architecture cabin network, allowing users to communicate many ways. Among Simphone's features and functions are two all-digital channels of integrated Iridium voice and data; PBX functionality via TrueNorth's OpenCabin phone application; a high-speed data router; 802.11 Wi-Fi; VoIP technology; dual CEPT-E1 interfaces for Inmarsat Classic Aero-H/H+/I; and an Ethernet link to broadband services. Analog interface enables use with legacy satcoms and cabin paging systems, and allows operators to continue using such analog POTS systems as the Honeywell MCS-3000 satcom. Partner with Satcom Direct.
	Simphone Master Console	Touch-screen control for airborne telecom management	Active management of all aircraft communicatiaons and links; full color, graphical display; menu- driven, touchscreen interface; configurable for 100+ stations; manages voice, Wi-Fi data, fax, VoIP, cockpit datalink, in-tercom and more; supports Iridium and all other terrestrial networks; fully customizable. Certified on Airbus Corporate Jet aircraft.
TrueNorth Avionics 141 Bentley Ave., Ste. B Ottawa, Ontario K2E 6T7 Canada (613) 224-3301 Fax: (613) 224-0954 **truenorthavionics.com**	**TrueNorth Stylus**	Multilingual handset	Incorporates TrueNorth's one-button interface, HD voice, wired and wireless configuration options; personalization options include custom materials to match the décor of any cabin or aircraft interior. Designed to match the footprint of TrueNorth's previous handsets. Can be programmed to operate in any language, including those with dedicated character sets such as Chinese, Japanese, Arabic and Russian.
	TrueNorth ExpressPlus	Cabin communications integration and security	Securely manages all wireless communications, IFE and cabin manage-ment devices. Using a built-in Ethernet-to-Wi-Fi link, the system interfac-es with all FCC-approved airborne wireless devices, including handsets, intercoms and smartphones, IFE units (DVD players, music players and game consoles), cabin control systems for lighting and ventilation, and electronic flight bags (EFBs) in the cockpit. Like its predecessor the True-North Express, the TrueNorth ExpressPlus also lets aircraft operators use their BlackBerry smartphones to send and receive e-mail over their existing Iridium satcom phones.
Universal Aviation Systems Corp. 3260 E. Universal Way Tucson, AZ 85756 (520) 295-2300 (800) 321-5253 Fax: (520) 295-2395 **uasc.com**	**UniLink Communications Management Unit (CMU)**	Data link communications	Provides a two-way data link communications path for the flight crew's needs for specific air-to-ground communications. Uses a Universal Avia-tion Systems FMS for control and display. UniLink connects users with selected ground-based service providers via VHF radio, satcom or digital telephone. All three communications media are supported. UniLink is available with or without an internal VHF radio. The design allows instal-lation flexibility and many economical features. Capabilities include flight planning, clearances, automatic position reporting, aircraft-triggered events, weather information in text and graphical displays, and messag-ing. The menu-driven user interface also allows for easy customization to match specific airline operational requirements.

INFLIGHT COMMUNICATIONS & ENTERTAINMENT SYSTEMS

Manufacturer or Service	Model/System/Service	General Capabilities	Remarks
ViaSat, Inc. 6155 El Camino Real Carlsbad, CA 92009 (760) 476-2200 Fax: (760) 929-3941 **viasat.com**	**ViaSat Yonder**	Mobile high-speed Internet service	Yonder, ViaSat's umbrella of services for business aviation, offers an array of flight support services including flight planning, weather, flight following, contract fuel and international trip support. Yonder connectivity choices include a full range of Inmarsat services and Iridium services for business aircraft. Yonder offers data link and satellite communications for the flight deck (*e.g.* submit flight plans via BlackBerry-type personal wireless devices) and business passenger communications for direct dial and direct dial international, VoIP phone service, faxing and videoconferencing. Yonder service will provide former ARINC SKYLink customers with the same service, but with an expanded coverage area that includes global coverage and virtually all major city pairs worldwide. Service availabalee from ARINC Direct, Satcom Direct and Satcom 1.
	ViaSat Broadband En route Communications Network	Global Ku broadband satellite coverage	Dedicated network guarantees access and data rates in excess of 6 Mbps to the aircraft and 500 kbps from the aircraft using airborne antennas as small as 30 cm. Based on the new ViaSat ArcLight 2 mobile satellite system. Service available from ARINC Direct, Satcom Direct and Satcom 1.
Vision Systems Aeronautics Route d'Irigny ZI Nord BP 32 69530 Brignais France +33 472 31 98 10 +33 472 05 51 96 **vision-systems-aero.fr**	**Numerous**	See remarks	Designs and manufactures IFE, cabin management, telephony, display, sound distribution, video-surveillance, video-conferencing systems, and provides multimedia content for business, regional and VIP aircraft.
VT Miltope 3800 Richardson Rd. South Hope Hull, AL 36043 (334) 613-6369 Fax: (334) 613-6344 **miltope.com**	**See Remarks**	IFE and communication Broadband networks and servers	Miltope's family of Airborne Broadband Network products offer all of the required functionality necessary to create custom airborne networks similar to how business office networks are created. Networks based on Miltope products may be readily expanded or reconfigured because of a common connector interface.